

(No Model.)

E. W. EDWARDS, Dec'd.

M. A. EDWARDS, Administratrix.

TURN TABLE.

No. 510,592.

Patented Dec. 12, 1893.

Fig. 1.

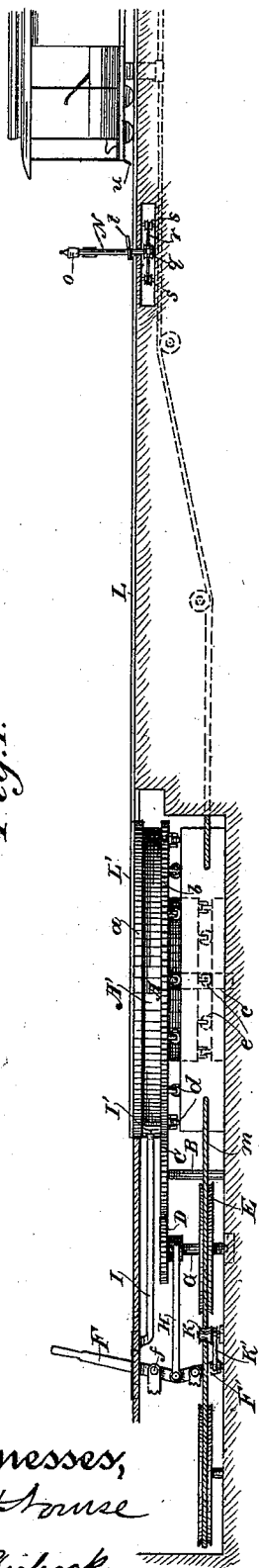


Fig. 2.

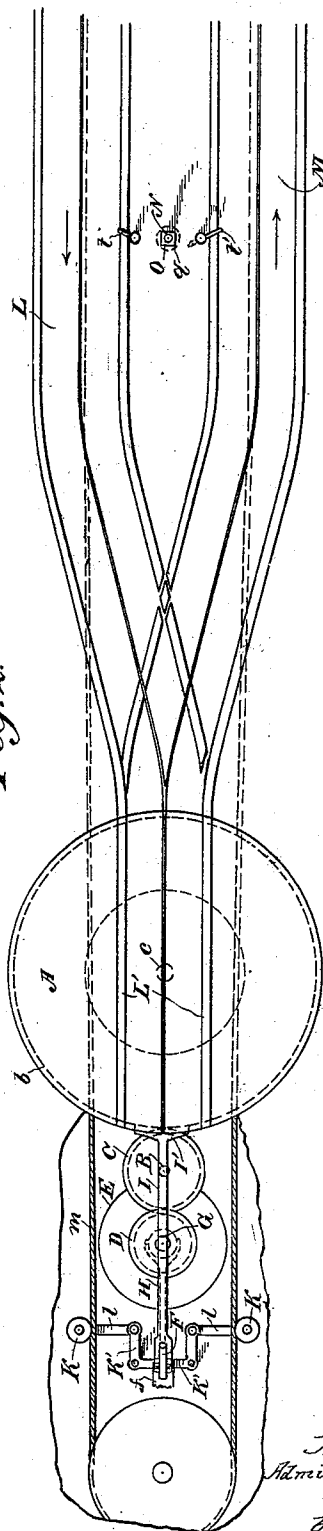
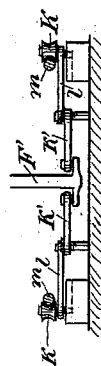


Fig. 3.



Witnesses,
J. H. House
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Inventor,
Margaret A. Edwards,
Administratrix of the estate of
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attys

UNITED STATES PATENT OFFICE.

MARGARET A. EDWARDS, OF SAN FRANCISCO, CALIFORNIA, ADMINISTRATRIX OF EDWARD W. EDWARDS, DECEASED.

TURN-TABLE.

SPECIFICATION forming part of Letters Patent No. 510,592, dated December 12, 1893.

Application filed January 13, 1893. Serial No. 458,294. (No model.)

To all whom it may concern:

Be it known that I, MARGARET A. EDWARDS, a citizen of the United States, residing in the city and county of San Francisco, State of California, administratrix of the estate of EDWARD W. EDWARDS, deceased, late a citizen of the United States, residing in the city and county of San Francisco, State of California, (as by reference to the duly-certified copy of letters of administration hereto annexed will more fully appear,) do hereby declare that EDWARD W. EDWARDS invented a new and useful Improvement in Turn-Tables for Cable Roads, of which the following is a specification.

This invention relates to improvements in turn-tables for cable roads.

It consists in certain details of construction, and a novel combination and arrangement of parts which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is an elevation of the turn-table. Fig. 2 is a plan view of the same. Fig. 3 shows the connection of the lower part of the operating lever with the friction pulleys K.

A is the turn-table which has an annular groove A', and an upper and lower peripheral flange a b. The lower flange b has gear teeth formed upon it so as to be engaged by the driving gear by which it is operated. This turn-table is supported upon suitable anti-friction rollers d which are journaled on the under side of the table proper, near the periphery thereof, and other rollers e journaled to the under side of the central depending portion, which latter also forms a part of the turn-table. The table revolves about a central pivot post c which forms a journal and guide for the same, and is suitably fixed in the road-bed.

C is a spur-wheel mounted upon a vertical shaft B. The teeth of this spur-wheel engage with the teeth b of the turn-table upon one side, and upon the opposite side, with the teeth of a movable connecting spur-wheel D. The latter is fixed to a suitable shaft G and at the upper end thereof, while the lower end of the shaft is provided with the large grooved wheel or pulley E, and through the medium

of this latter, and the wheel D, the turn-table is rotated.

F is an operating lever fulcrumed at any suitable point as shown at f, and F' is a second lever hinged to the first one and having its fulcrum point below the hinge, so that the movement of the lever F moves F'.

H is a connecting rod extending from the lever F below its fulcrum point, to a collar or box surrounding the shaft G, in close proximity to the spur-wheel D, which box serves to support the upper end of the shaft G. The lower end of the shaft turns in a suitable step which will also allow the shaft a slight tilting motion in the step. When the upper end of the lever F is moved toward the turn-table, the lower end is drawn backward, and the shaft G is thus tilted about its step support until the gear D is disengaged from the gear C.

Above the hinge point f is a rod or arm I, one end of which connects with the lever F, and the other with the brake shoe I' which is adapted to press against the rim of the turn-table A, and thus stop the table at any desired point. It will be observed that by this operation the turn-table is stopped by means of the brake shoe as soon as the spur-wheel D is thrown out of gear with the intermediate spur-wheel C.

In order to transmit motion to the spur-wheel D, when it is in gear, and to allow it to stop moving when it is out of gear, I have shown grooved rollers K journaled upon the ends of arms or rods l. These rollers, in their normal position, stand just outside of the incoming and outgoing lines of the cable m, through which power is transmitted to move the cars, and these two lines of cable pass in close proximity to opposite sides of the large grooved wheel E upon the shaft G. The inner ends of the arms l are connected with the outer ends of bell-crank levers K'. These levers are fulcrumed at their angle, as shown, and their inner ends extend toward each other, and are connected with the lower portion of the lower lever F' which is fulcrumed below the rod H, so that when the upper end of the lever F is thrown toward the table to disengage the spur gear D from the gear C, and to

throw the brake I' into contact with the table to stop the latter, the inner ends of the levers K' will also be thrown forward, and through this action, the arms L and the rollers K, will be thrown outward and out of contact with the cable *m*. When the lever F is thrown in the opposite direction, or away from the cable, it withdraws the brake I' from the latter, throws the upper end of the shaft G forward so that the spur-wheel D engages with the wheel C, the latter being engaged with the gear teeth upon the periphery of the lower flange of the turn-table. At the same time by reason of its connection with F, the lower end of the lever F' is thrown backward or away from the table, and pulling upon the ends of the levers K', which are connected with it, it acts through the arms *l* to draw the rollers K into contact with the moving cable *m*. This forces the cable into contact with the grooved roller E, and causes it to wrap slightly around the pulley, and thus provide sufficient frictional contact with the latter, to cause it and its connected gear to rotate and the motion is transmitted therefrom to rotate the turn-table.

The turn-table has the track L' extending across its center, and the incoming track L over which the cars approach the table is curved, so that the ends of the track will correspond with those of the track L' on the table, when the latter is in proper position to receive a car. The outgoing track M similarly connects, and when the cars leave the table, after being turned around, they pass out upon the track M.

In many cases where these tables are used, the traffic is very large, cars running on to and off of the table at intervals of less than one minute, and in order to indicate to the gripman of an approaching car, the position of the table, and whether it is ready to receive his car or not, I employ a signal which consists of a vertical post N having a lantern or other suitable signal O upon the upper end. If the signal is to be used at night, it may consist of a square lantern having colored glasses, one of which may be red, to indicate danger, or that the table is not in the right position to receive a car, and the other some other color to indicate that the table is in the proper position. For daylight signals, similar colored targets may be employed upon the same post or standard.

Having thus described the invention, what is claimed is—

1. A combination of a turn-table having anti-friction rollers and toothed engaging flange, and a groove for the reception of a brake shoe, with an intermediate spur-wheel mounted upon a vertical shaft and engaging the toothed flange of the turn-table, an outer gear-wheel mounted upon a movable shaft so

as to be engaged with or disengaged from the intermediate spur-wheel, a grooved pulley fixed upon the lower end of said shaft, and between the outgoing and incoming lines of cable and tightening rolls adapted to engage the cable and force it against the rim of the pulley whereby the latter and gear-wheels and table are caused to revolve, substantially as herein described.

2. A turn-table having a toothed flange around its periphery in combination with a gear-wheel mounted upon a vertical shaft having its teeth engaging with those of the turn-table, a second gear mounted upon a second vertical shaft, and movable to or from the intermediate gear, a lever having a rod connecting it with the upper end of the movable gear-shaft whereby the latter is thrown forward or backward to engage or disengage its gear with the intermediate gear, and a second rod connecting the lever with a brake shoe whereby the latter is thrown into contact with the periphery of the table when the gear is disengaged, and thrown out of contact when the gear is engaged, substantially as herein described.

3. A turn-table for cars having the toothed flange around its periphery, in combination with an intermediate gear-wheel mounted upon a vertical shaft and engaging the teeth of the turn-table, a second gear mounted upon a shaft and movable to or from the first gear, a hinged lever F connected by a rod with the upper end of the movable shaft, and also connected by a second rod with the brake shoe which is thrown into contact with the turn-table when the gear is thrown out of engagement, and thrown out of contact with the table when the gear is thrown into engagement, a grooved pulley fixed to the lower end of said shaft so that its periphery rotates in close proximity to the driving cable *m* upon each side, and tightening rollers K mounted upon arms which are connected with bell-crank levers K' whereby the rolls are moved away from the table or caused to press the cable into contact with the pulley between them, said bell-crank levers being connected with lower end of the hinged lever F', so that the engagement or disengagement of the cable is produced by the same movement of the lever which engages or disengages the gear and the brake, substantially as herein described.

In witness whereof I have hereunto affixed my mark.

her
MARGARET A. X EDWARDS,
mark

Administratrix of the estate of Edward W. Edwards, deceased.

Witnesses:

S. H. NOURSE,
J. A. BAYLESS.